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TO: Colonel Dillon
House Science & Astronautics Committee
Room 214 B, Old House Office Building

FROM: John S. Warner
Legislative Counsel
[redacted]

STAT

Per your request to [redacted] there is attached an unclassified paper titled: First Explicit Acknowledgement of Soviet Manned-Flight Program.

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First Explicit Acknowledgment of Soviet Manned-Flight Program

With the launching of the spaceship satellite, Soviet propaganda has for the first time firmly committed the USSR to the man-in-space race. The official TASS announcement of the feat made it clear that the launching of the satellite was part of an experimental program aimed at putting a manned vehicle in space. No previous Soviet outer-space experiment has been so described.

TASS states that the Soviet Union has been conducting scientific research and design work in preparation for a manned flight into outer space "for the past few years." This has not been made clear in propaganda until now. Only since last October have there been any propaganda indications of actual preparations for manned flight--and these have until now been indirect, in the form of sporadic discussions of human physiological experiments, the testing of special gear such as space suits, and the accumulated experience of Soviet test pilots. At no time until now has the propaganda explicitly acknowledged the existence of a fullscale manned-flight program in the USSR.

Noting that the spaceship has a pressurized cabin on board, which contains a dummy space man and "all the necessary equipment for a future manned flight," the TASS announcement states that this "lays the beginning for the difficult endeavors to build reliable spaceships guaranteeing safe manned flights into outer space."

Subsequent propaganda underscores the connection between the spaceship satellite and the Soviet man-in-space project. Scientist Dobronravov, quoted by TASS, asserts that "the main scientific information the spaceship is expected to furnish is necessary for finding out the possibility of man's presence in space and for his safe return to earth." TASS on 18 May quotes an IZVESTIA article by Professor G. Rosenberg as saying that the Soviet spaceship "is the first of a series of satellites designed to solve the problem of human travel in space." One prominent Estonian scientist goes so far as to predict, in a TASS interview, that "in all probability, not years but months will be sufficient" to prepare for the flight of a Soviet man into outer space. He conjectures that the "great moment" might even occur this year. Western newspapers on 16 May quoted M. A. Kharmalov, Soviet delegation spokesman in Paris, as saying that the USSR would "very soon" launch a manned space rocket, but Moscow has not repeated this forecast.

Prior Caution in Discussing Manned Flight: Until now the propaganda had pictured manned space flight as the most remote undertaking relative to all other projects on the Soviet space-flight agenda. Listings of projected experiments for a foreseeable future have contained, in almost stereotyped fashion, (1) more earth satellites, (2) further moon probes, and (3) rockets to Mars or Venus. Manned flight has been projected into a vague, indefinite future. Soviet media did not carry the most optimistic public forecast by a Soviet spokesman--a 23 April 1959 REUTERS dispatch quoting Professor Dmitri Martinov as saying it would be two to ten years before the USSR could send a man into space and bring him back safely.

Until recently the propaganda had even played down the importance of putting a man into space. As recently as 20 January 1960, commentator Belitskiy told Moscow's North American listeners: "It is wrong to think that manned space flight is the main or top-priority objective" of Soviet scientists. Although Soviet media in recent months tended to generate an air of increased optimism around this subject, predicting more frequently that a Soviet man would be first in outer space, right up to the present spaceship launching the man-in-space question continued to be discussed with studied caution. One leading space scientist--Academician Sedov in NEW TIMES, January (No. 3) 1960--even questioned whether a man in space would be able to solve any problems that could not be solved by automatic devices. Professor Pobedonostev, in INTERNATIONAL AFFAIRS, November (No. 11) 1959, wrote off the U.S. astronaut project as "sheer sensationalism." This was Moscow's first, very belated, acknowledgment of the Mercury project.

Comment on Pacific Tests Anticipated Heavier Satellite Launching

Soviet comment had been anticipating the launching of a heavy satellite since late January, when the propaganda on the Soviet Pacific Ocean rocket tests emphasize the scientific advantages to be derived from the development of "heavier" earth satellites. The tests themselves were said to have been part of a program for producing a more powerful multistage ballistic rocket that could launch heavier earth satellites or fly to other planets. Dobronravov now (15 May) explicitly links the spaceship satellite's booster to the rockets tested by the USSR last January.

Acknowledgment of Difficulties Regarding Satellite Recovery

According to the TASS announcement, the spaceship satellite was designed to simulate a manned space flight in all respects except recovery of the passenger capsule. While the pressurized cabin will be separated from the space ship (TASS does not disclose when this will be attempted), it will "descend on command from earth and burn up in the denser layers of the atmosphere." Scientist Dobronravov, in a Radio Moscow comment on the launching on 15 May, expresses confidence that "the day is not far off" when the problem of satellite recovery can be solved. The qualified nature of Dobronravov's statement, together with Moscow's failure to announce a recovery attempt of the spaceship's cabin, adds up to an admission of failure so far to solve this key problem of space flight. Dobronravov's earlier optimistic estimate--in the 27 January LITERATURE AND LIFE--that the "next stage" in developing artificial earth satellites would be to equip them with a device that would permit their safe return to earth has thus failed to materialize.

The propaganda on the space ship to date has contained no reference to retrorockets or other devices that Soviet scientists have previously said are necessary for any safe descent of a sputnik to earth.

Some disappointment over the failure to make progress on the recovery problem is registered in a SOVIET AVIATION article reviewed by TASS on 18 May: "Some enthusiastic devotees of astronautics have been somewhat disappointed on learning that the cabin of the spaceship satellite will not be retrieved." The authors of the article also indicate that Soviet scientists are in fact still some distance from a break-through in solving the reentry problem. This problem, they write, is "so complicated that special investigations will have to be carried out to solve it." Academician Sedov, speaking in the same vein in a home service broadcast on 15 May, says that although the USSR has sent aloft an apparatus capable of sending a man into outer space, "the problem of a safe return to earth has not yet been solved in practice and the problem of safe flight for long periods of time also requires considerable research." Sedov's talk indicates that the reentry problem has very high priority, noting that a "large number" of Soviet scientists with various specialties are "now engaged in the solution of these problems."

Manned Space Flight

Soviet scientific spokesmen suggest progress in preparing for manned space flight, but balance optimistic statements with admonitions against premature expectations. Relative to other space projects on the Soviet agenda, the man-in-space program has been pictured all along as the most remote undertaking. No Soviet man will be sent into space, science commentators insist, until such cardinal problems as safety during flight, safe return to the earth's atmosphere, and a safe landing are solved.

"It is wrong to think that manned flight into space is the main or top priority objective" of Soviet scientists, commentator Belitskiy told North American audiences on 20 January 1960. According to Belitskiy, "such a flight will undoubtedly be made in due course, but not before its safety is thoroughly insured by adequate probing of outer space with automatic rockets."

Similarly, Professor Pokrovskiy, discussing the prospects for manned space flight in the February (No. 2) PROBLEMS OF PHILOSOPHY, pointed out that "the present level of science and technology does not yet make it possible to avoid some harm to the health of man in space travel." He added reassuringly, however, that "contemporary science makes it possible to expect that effective means will be found in the near future to shield man against radiation, and that future space travelers will have their health protected."

At the same time, the propaganda seems to reflect and even at time to generate a somewhat increased atmosphere of optimism about prospects for putting a Soviet man into outer space. Pokrovskiy reported in his PROBLEMS OF PHILOSOPHY article that a large number of people in the Soviet Union had "urgently" requested the right to participate in the first manned space flights.

Somewhat more frequency than in the past, there are predictions that the first astronaut will be a Soviet citizen. An article in the 31 December 1959 SOVIET AVIATION quoted the following statement by a Soviet test pilot that had originally appeared in the same newspaper on 18 October:

> Everything accomplished in the heavier atmosphere of earth rests in the person of our pilot specialist, who is more then prepared for the start into the cosmos. We are convinced that Soviet man will be first to fly in the cosmos. Our test pilots will put forth every effort to ensure that this first man in the cosmos will be a Soviet test pilot.

In both domestic and foreign-language programs on 3 February 1960 Radio Moscow attributed to U. S. scientists Wernher Von Braun the opinion that the Soviets "may very well beat the United States to launching a man into space." The following day, Soviet scientist G. N. Lipzkiy said in a Moscow home service talk on the nature of the moon that "the day is not far off when the surface of the moon will be visited by the first man from earth, and we do not doubt that it will be our man-- a Soviet man."

Soviet regional radio services have also carried several predictions that a Soviet man will be the first to fly in outer space.

Although there still has been no direct mention in the propaganda of an existing astronaut-in-training program in the USSR such as the U. S. Mercury Project, preparing for manned flight is connoted in sporadic discussions of human physiological experiments and of the experience accumulated by Soviet test pilots. TASS published on 13 January a new popular science film for exhibition in the USSR that is concerned with the biological reactions of astronauts in outer space. According to TASS, the film shows experiments with chlorella, miscroscopic algae capable of vigorously regenerating oxygen. The film also reportedly records "man's reaction at eight G's of acceleration when his body weighs 600 kilograms and his blood becomes heavier than mercury."

In one of a regular series of Moscow home service programs on science and engineering, on 29 January, Soviet scientist Yuri Frolov said:

> Science is working on ways and means of reducing the tremendous strain due to acceleration which man would experience in take-off. There is also the problem of special suits. Some are already undergoing tests. The new science of space physiology is faced with a great many unsolved probelms, but unsolved does not mean unsolvable. We physiologists will do all we can to put man in space at an early date.

Similar articles discussing in detail laboratory studies of the effects of speed, altitude, and G-forces on the human organism had appeared in mass circulation organs as early as last October.